ALTERNATIVES

Section 2: ALTERNATIVES

2.1 THE STUDY PROCESS

The study process adopted for the completion of the environmental and location study for the North-South Expressway project is shown in Exhibit 2-1. Three primary phases of work are involved and include:

- The Corridor Study which led to the refinement of several previously developed corridor alternatives, approximately 600 meters (2,000 feet) in width within the study area and identification of a Preferred Corridor
- The Alignment Study which led to the development of specific highway alignment alternatives, approximately 90 meters (300 feet) in width within the Preferred Corridor and identification of a Preferred Alignment
- Environmental Documentation which consists of the preparation of the Draft and Final Environmental Impact Statements and other supporting documents and the selection of a single Selected Alignment identified in the Record of Decision.

Exhibit 2-2 shows this multi-step study process which allows the examination of a full range of alternatives at both the corridor and alignment levels, with increasing detail as the study progressed. This enabled alternatives to be evaluated in several stages so that only the most practicable, those alternatives that met the project purpose and need and that had the potential to minimize environmental impacts, were advanced to the next phase of study.

This study process also satisfies various regulatory and coordination requirements for projects integrating the National Environmental Policy Act (NEPA) and the Section 404 Permit processes. The multi-step project approach allowed a thorough consideration of all alternatives developed with respect to potential impacts to waters of the United States, including wetlands, as required under Section 404 of the Clean Water Act.

The required Section 404(b)(1) alternatives analysis has been conducted during both the corridor and alignment studies as the project progressed. This approach emphasized first avoidance, and then minimization efforts to insure that the identified Preferred Corridor and ultimately the Selected Alignment, minimizes wetland impacts to the greatest extent possible.

2.2 THE NO-ACTION ALTERNATIVE

At each stage of the study process, the alternatives developed were compared to the decision to take no action. The No-Action alternative would not involve the construction of the North-South Expressway project, but would involve normal maintenance activities and planned safety improvements to U.S. 71.

Under the No-Action alternative, U.S. 71 would remain a two-lane facility from LA 1 to the Arkansas state line and a five-lane facility from LA 1 to I-220. As a result, the level of service and safety issues identified in Section 1 would remain. Projected future traffic volumes would result in a poor level of service along this entire route.

The social benefits of increased accessibility to services and retail centers, medical facilities, and educational institutions would not be realized. In addition, emergency service response time may be affected due to the increased traffic congestion, reduced speeds and unstable traffic flows predicted for many local highways.

The Interstate system would continue to exist with a major 56 kilometer (35 mile) gap in north-south travel routes in Louisiana. Many industries would continue to transport materials on the existing local highways where truck traffic would mix with local traffic and travel through local communities.

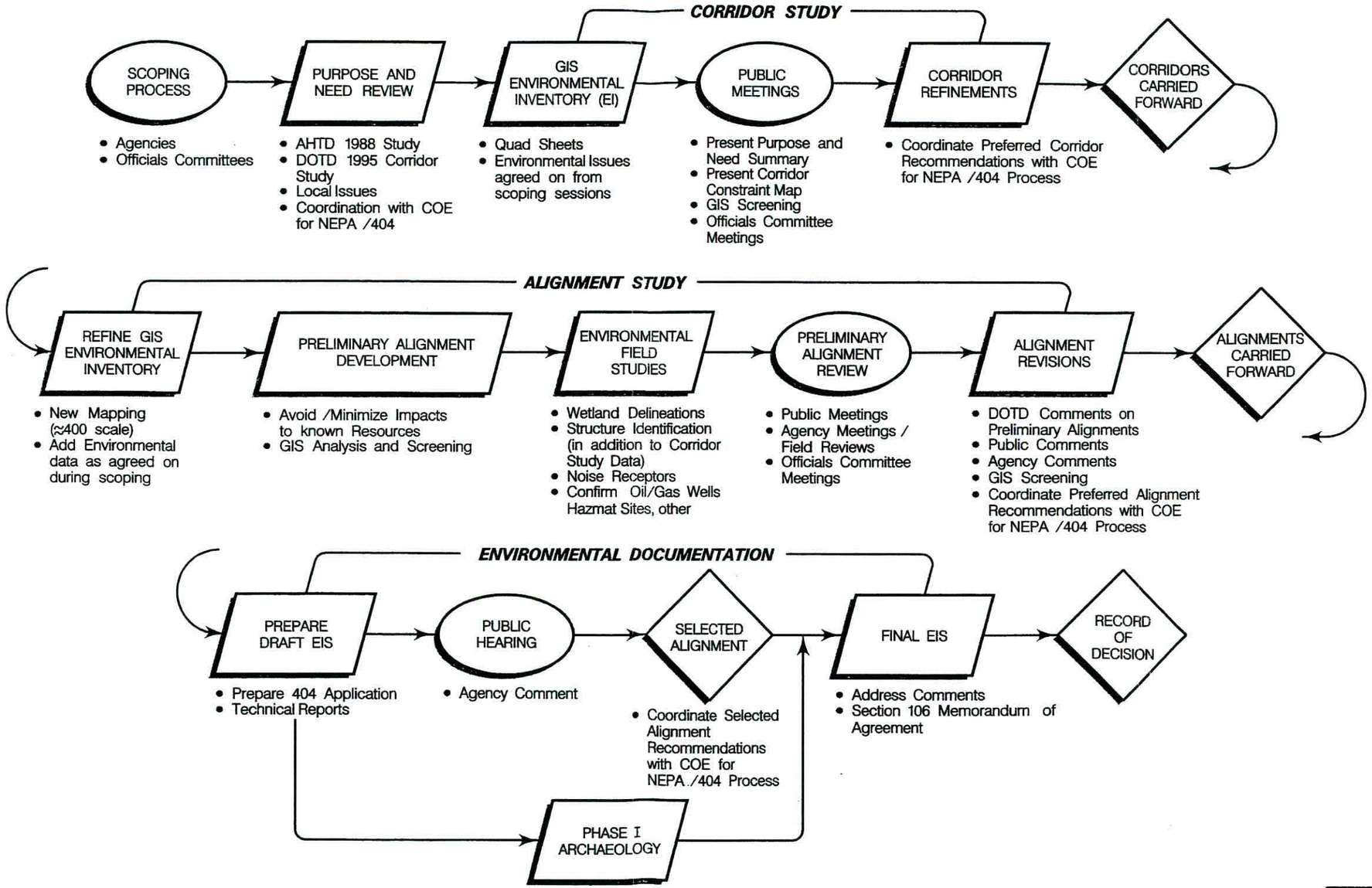
Selection of the No-Action alternative would avoid a major state and federal expenditure and would avoid impacts, both beneficial and adverse, to the social, economic, natural and cultural environments. The No-Action alternative will be maintained as an alternative to new highway construction until a final decision has been made and documented through the completion of the EIS process.

2.3 THE CORRIDOR STUDY

The Corridor Study was the first phase of the project study process and considered the feasibility of corridor alternatives 600 meters (2,000 feet) in width which were evaluated with respect to a number of social, natural, and cultural environmental features. The objective of the Corridor Study was to:

- Review and evaluate the 1995 Feasibility Study and resulting corridors
- Create a project Geographic Information System (GIS) using information from the Feasibility Study
- Add additional environmental information into the GIS through field work and newly acquired agency information
- Use the GIS to conduct an environmental and preliminary engineering analysis of the previously developed corridors
- Present corridor comparisons to the public for review and comment
- Refine the corridors based on public and agency involvement
- Select a Preferred Corridor in which to develop specific Alignment Alternatives.

The Corridor Study concluded with the selection of a corridor within which it was feasible to construct a fully controlled access highway.



SYMBOLOGY:

- Review Point and/or Public Meetings
- Work in Progress
- Decision and /or Concurrence Point

NORTH–SOUTH EXPRESSWAY

Exhibit 2–1

STUDY PROCESS

Baker

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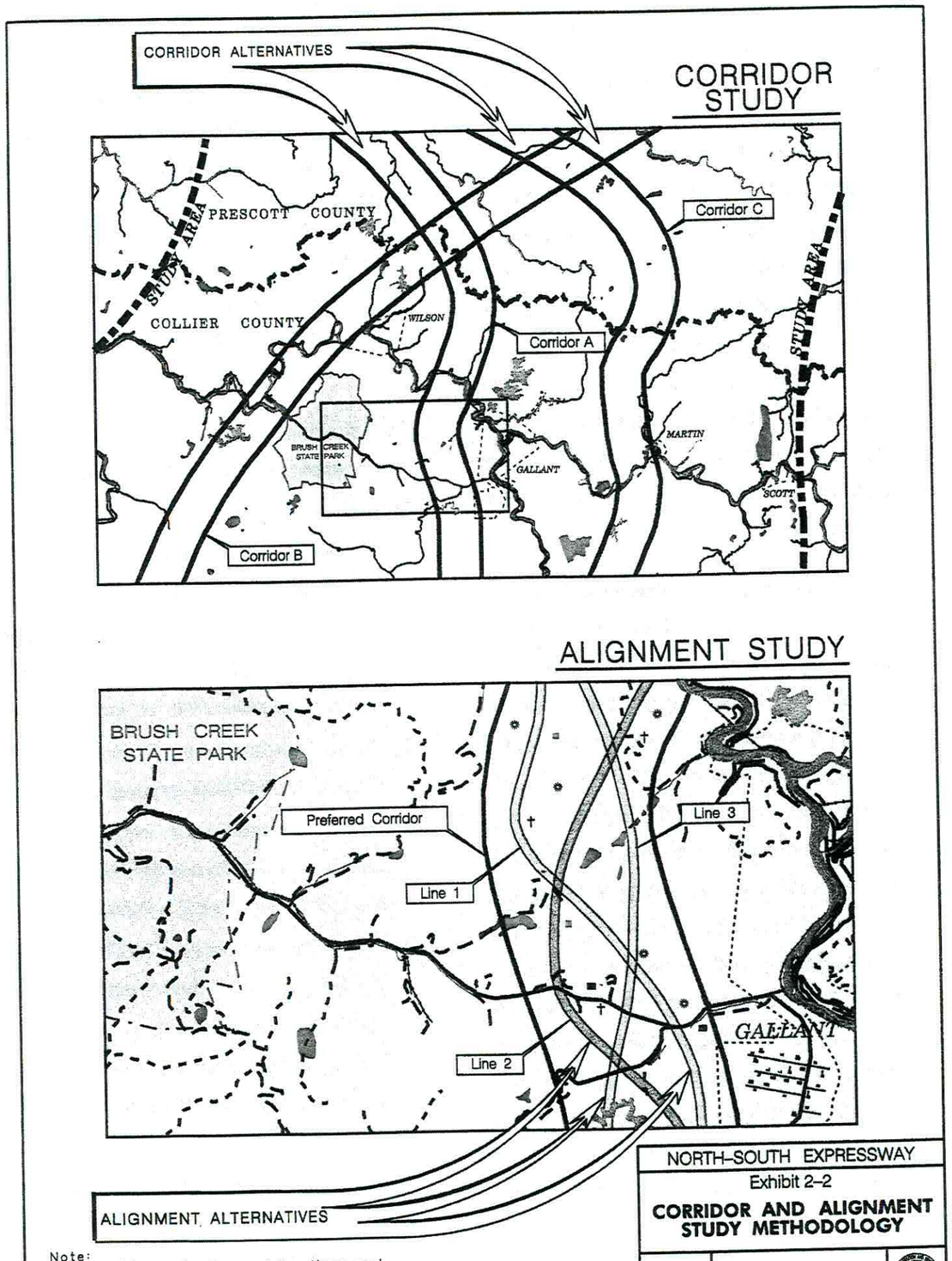


Note:
The corridor and alignment locations and constraints shown are for illustrative purposes and do not relate to the North-South Expressway project study area.

NORTH–SOUTH EXPRESSWAY

Exhibit 2–2

CORRIDOR AND ALIGNMENT STUDY METHODOLOGY

Baker | NOT TO SCALE

This corridor was then carried forward to the Alignment Study phase of the project. It is important to note that a corridor is considered feasible if it can be demonstrated that a highway alignment can be developed within it that meets the project purpose and need, meets the design criteria, is constructible, and can avoid or minimize impacts to known sensitive resources. During the Alignment Study phase, more detailed engineering and environmental studies were conducted within the selected corridor and several specific highway locations, defined for this project as alignments, were developed.

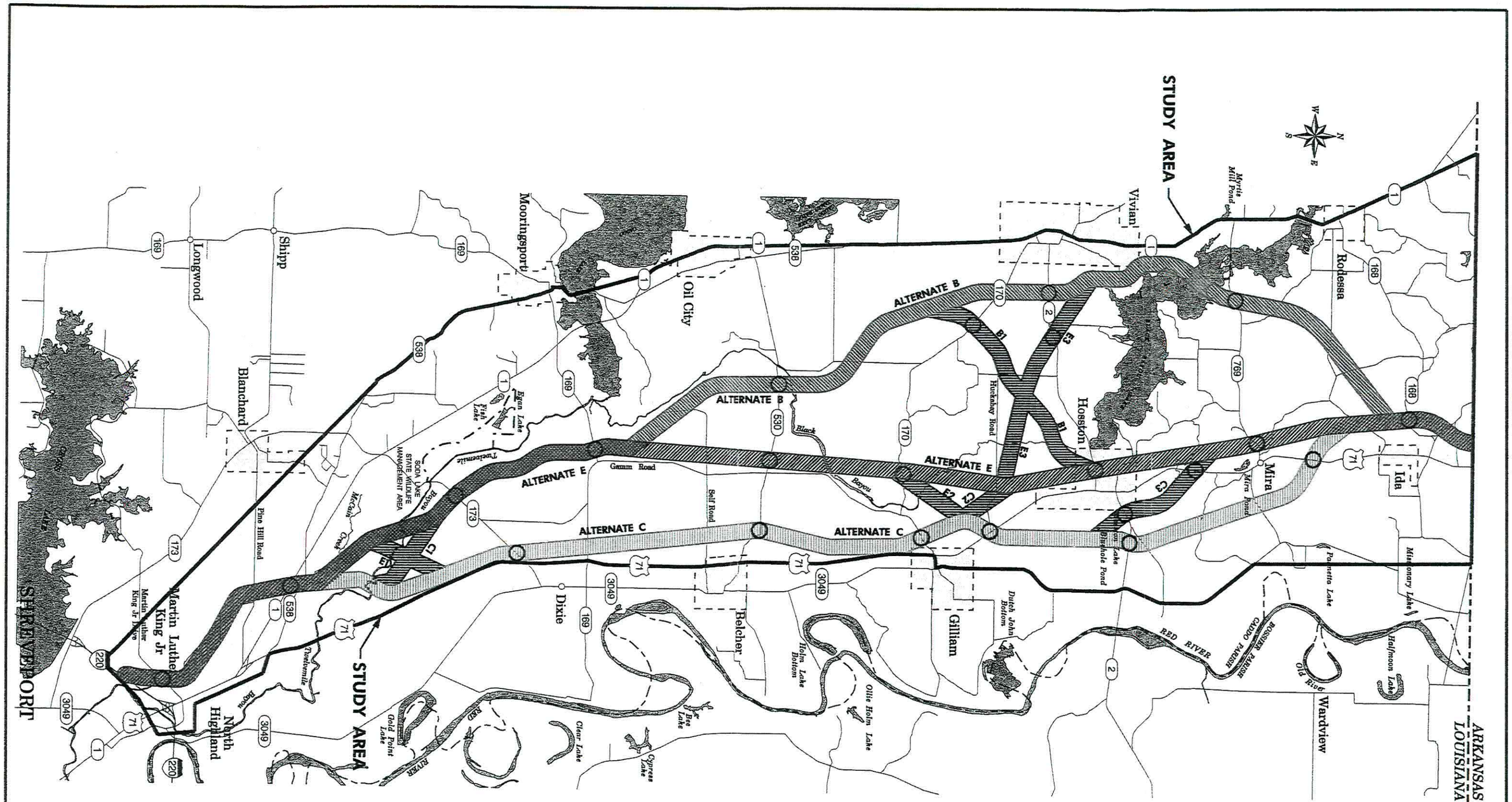
2.3.1 Summary of 1995 Feasibility Study

The 1995 North-South Expressway Feasibility Study examined an area approximately 56 kilometers (35 miles) in length bounded on the north by the Arkansas state line and on the south by Interstate 220 between U.S. 71 and LA 173. The study area varied in width from 3 kilometers (2 miles) at the southern end to a maximum of 16 kilometers (10 miles) and was generally bounded on the west by LA 173, LA 538 and by LA 1 north of Mooringsport, and on the east by U.S. 71, except for an area east of Gilliam, Hosston, and Ida. During this study, existing environmental information was examined, a comprehensive traffic analysis was conducted, three primary corridors were developed, and public information meetings were held to develop three primary 600 meter (2,000 feet) wide highway corridors within the Caddo Parish study area (Exhibit 2-3). These corridors were identified as the general locations within the study area that were feasible for the construction of a fully controlled access highway.

Environment

Environmental conditions within the study area were documented using existing information collected from a variety of sources and included:

- Major utilities - electrical and petroleum product transmission lines within the study area
- Land Use - general land use within the study area (agricultural, oil production fields, forest, water bodies, residential development)
- Floodplains - Federal Emergency Management Agency (FEMA) floodplain maps were used to determine the extent of the 100 year floodplain
- Wetlands – included areas identified on U.S. Geologic Survey (USGS) topographic maps
- Habitat Management Areas - included Soda Lake State Wildlife Management Area and Black Bayou Game and Fish Preserve
- Oil and Gas Fields - included the Caddo-Pine Island, Hosston and Rodessa Fields
- Solid Waste Sites and Underground Storage Tanks - included location of all known sites from the Louisiana Department of Environmental Quality
- Community Facilities - included known schools, churches, hospitals, cemeteries, parks, and public buildings.



LEGEND

- ALTERNATE B
- ALTERNATE C
- ALTERNATE E
- LINKS
- POTENTIAL INTERCHANGE

NORTH–SOUTH EXPRESSWAY

Exhibit 2–3

ORIGINAL CORRIDOR LOCATIONS

Baker

NOT TO SCALE

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Traffic

The Feasibility Study evaluated the existing traffic in the study area, estimated future (years 2005 and 2020) traffic volumes on area highways, and evaluated the traffic impacts and resulting level of service associated with the North-South Expressway on the area transportation system. This information is presented in Section 1 (Table 1-2).

Public Involvement

Public involvement during the Feasibility Study included workshops and public information meetings held in Shreveport and Gilliam in August 1994, Shreveport and Hosston in June 1995, and the formation and involvement of a Technical Advisory Committee comprised of Parish and municipal government participants. During the June 1995 meetings, three primary 600 meter (2,000 feet) wide highway corridors within the Caddo Parish study area were presented to the public for review and comment. These corridors were designated Alternates B, C, and E and are shown in Exhibit 2-3.

Corridors Developed

A major consideration in the location of the three corridors was the southern portion of the study area, northwest of I-220 and south of LA 538. This area is densely populated with residential and business development as well as churches and other community facilities. The undeveloped area associated with the McCain Creek drainage provided the greatest opportunity to minimize residential and business relocations and associated social impacts. All corridors are common within this area.

All corridors start at the intersection with I-220 and proceed north on the west side of McCain Creek to intersect with Martin Luther King, Jr. Drive (MLK). After crossing MLK, the corridors cross over McCain Creek to avoid residential development and then continue northeasterly along the east side of the creek, cross Pine Hill Road, then turn northward where they intersect with LA 1 and LA 538.

At LA 538, Alternate C continues north approximately 3 kilometers (2 miles) until it intersects with a major electrical power line transmission easement. Alternate C parallels the power line until veering east just north of LA 530. It then continues north to intersect with LA 170 approximately 760 meters (2,500 feet) west of U.S. 71. Alternative C then crosses U.S. 71 near Huckabay Road approximately half way between Gilliam and Hosston, then continues north to cross LA 2 approximately 2 kilometers (1.25 miles) east of U.S. 71.

From LA 2, Alternate C continues north to a point east of Mira, then turns west crossing U.S. 71 half way between Mira and Ida. Alternate C turns north to follow Alternate E which ends at the state line approximately 915 meters (3,000 feet) west of

U.S. 71. All corridors end at the state line at this common point. At the time of completion of the DOTD Feasibility Study, November 1995, the Arkansas State Highway and Transportation Department (AHTD) had selected Alternate E as the "technically preferred" alignment in their study of the route. As such, the final DOTD corridors were revised to accommodate the findings of the AHTD study. To allow flexibility with the exact state line crossing location, the AHTD Final EIS states that the southern section, approximately 6.4 kilometers (4 miles) of the preferred alternative between Doddridge, Arkansas and the Arkansas-Louisiana state line, would be constructed after the completion of the Louisiana study.

Alternate E begins immediately north of the Alternate C crossing of LA 538 and turns to the northwest, crosses Twelvemile Bayou and then crosses LA 173 approximately 4 kilometers (2.25 miles) west of U.S. 71. Progressing northward, Alternate E crosses LA 169, LA 530, and LA 170 between 3 and 4.5 kilometers (1.75 and 2.75 miles) west of U.S. 71. West of Hosston, Alternate E crosses LA 2 between the Black Bayou dam and a major electric power line transmission easement. This corridor north of LA 2 would involve some residential relocations, but would not directly impact Noah Tyson Park located on Black Bayou Lake. Alternate E continues north and crosses LA 769 approximately 915 meters (3,000 feet) west of Mira, crosses LA 168 approximately 915 meters (3,000 feet) west of Ida and ends at the state line.

Alternate B was originally developed to provide better access to the communities of Rodessa, Vivian, and Oil City. Alternate B branches to the west of Alternate E approximately one mile north of LA 169 and veers northwest to cross LA 530 approximately 3 kilometers (1.75 miles) east of LA 1. Alternate B continues north and crosses LA 2 approximately 2.5 kilometers (1.5 miles) east of LA 1 and continues north crossing Black Bayou and LA 769, then veers northeast to cross LA 168 west of Ida and then connects with Alternate E at the state line.

A number of different corridor links were also developed that connect various segments of Alternates B, C and E. This allows the three primary corridors to be combined to form other distinct alternatives.

2.3.2 Scoping Process

The Scoping Process initiated the EIS development for the North-South Expressway project. This process consisted of a series of meetings held in September 1997 to review the findings of the Feasibility Study and identify additional environmental, socioeconomic, or engineering issues that would be considered during the corridor evaluation process. Groups participating in this process included state and federal resource agencies and local elected

officials of both Shreveport and north Caddo Parish. Meeting minutes and attendance records of all meetings are on file at DOTD.

Initial public meetings were deferred to allow the evaluation of the Feasibility Study and the addition of environmental information into the project GIS through field work and agency database review. This allowed the completion of an environmental and preliminary engineering analysis of the previously developed corridors that was subsequently presented to the public. This approach minimized duplication of material previously reviewed during the June 1995 public meetings.

Local Official Involvement

Two groups of local elected officials within the study area were formed, the Shreveport Officials Committee and the Rural Officials Committee, and met on September 25, 1997 in Shreveport and Hosston, Louisiana, respectively. Potential project benefits and concerns were discussed with each group. Potential project benefits identified at these meetings included:

- Attraction of new businesses to rural Caddo Parish communities such as Vivian, Gilliam and Hosston
- Increase and improve area tourism
- Improve access to medical facilities and other social services
- Relieve congestion on existing north-south routes
- Improve safety through diversion of truck traffic from local roads.

Potential project concerns identified during these meetings included:

- Farmland impacts
- Oil and gas field impacts
- Residential and business displacements.

Agency Involvement

Several state and federal resource agencies met on September 24, 1997 to discuss the proposed North-South Expressway and were invited to participate in a study area field trip to view the various communities and environmental resources that may be affected by the North-South Expressway. Issues of concern and how each issue would be addressed during both the corridor and alignment phase of the study were discussed and recorded. Issues identified and discussed included cultural resources, Indian lands, wetlands, protected species, access to communities, hazardous waste, potential Section 4(f) properties, oil and gas resources, land use, farmlands, and public water supplies. During the field view, the group verified that farmlands were an important resource in the study area and the U.S. Fish and Wildlife Service identified Black Bayou Lake and the associated cypress wetland ecosystem as an extremely important area to avoid. In addition to

the September 24, 1997 meeting, individual meetings were held with the Louisiana Department of Culture, Recreation, and Tourism, Division of Archeology on November 18, 1997 and the U.S. Army Corps of Engineers, Vicksburg District on November 19, 1997. Individual contact was made on November 13, 1997 with the U.S. Environmental Protection Agency. No additional issues were raised by these agencies.

2.3.3 Environmental Inventory

Concurrent with the Scoping Process, additional environmental information within the study area was collected and entered into the project GIS for subsequent corridor review and screening. The data entered into the GIS included:

- Color Infrared Photography - Obtained photography from the National Aerial Photography Program (NAPP) to conduct photointerpretation of potential wetland areas.
- Hydric Soils - Obtained soil survey from Caddo Parish Natural Resources Conservation Service. Hydric soils were identified and used as an indicator of potential wetland areas.
- Protected Species - Obtained digital information from the Louisiana Department of Wildlife and Fisheries, Natural Heritage Program to determine the location of federal and state listed species.
- Cultural Resources - Obtained information on known archaeological sites and historic structures from the Louisiana Division of Archaeology and Division of Historic Preservation. High probability areas that may contain prehistoric or historic archeological resources were developed by archaeology specialists.
- Standing Structures - Primary standing structures, such as houses, businesses, schools, churches, and other community facilities were inventoried throughout the study area.

An environmental inventory of the study area was developed by combining this "new" and updated data with the information collected during the Feasibility Study. Through GIS analysis, potential involvement with the various resources was determined for each of the previously developed corridors. Exhibit 2-4 presents a comparison of the three main corridors (Alternates B, C, & E) and the seven corridor combinations that can be developed using the links. It is important to recognize that the values shown in the matrix represent the resources that exist within the full 600 meter (2,000 feet) wide corridor.

NORTH-SOUTH EXPRESSWAY
Exhibit 2-4
CORRIDOR COMPARISONS
NOT TO SCALE
Baker

CORRIDOR COMPARISONS

VALUES SHOWN ARE WITHIN FULL 2,000 FOOT CORRIDOR. ACTUAL HIGHWAY IMPACTS WOULD BE SUBSTANTIALLY LESS.

	CORRIDOR DESCRIPTION	LENGTH (MILES)	POTENTIAL INTERCHANGES	STRUCTURES: RESIDENTIAL	STRUCTURES: BUSINESSES	STRUCTURES: CHURCHES	STRUCTURES: COMMUNITY FACILITIES	STRUCTURES: CEMETERIES	PARKS	NATURAL RESOURCES: HABITAT MANAGEMENT AREAS	NATURAL RESOURCES: WETLANDS	NATURAL RESOURCES: HYDRIC SOILS	NATURAL RESOURCES: FLOODPLAINS	NATURAL RESOURCES: OIL AND GAS FIELDS	NATURAL RESOURCES: FARMLANDS: PRIME FARMLAND	NATURAL RESOURCES: FARMLANDS: LOCAL FARMLAND OF STATEWIDE IMPORTANCE	CULTURAL RESOURCES: RECORDED ARCHAEOLOGICAL SITES	CULTURAL RESOURCES: RECORDED HISTORIC STRUCTURES	CULTURAL RESOURCES: HIGH PROBABILITY AREAS	SOLID WASTE AND UNDERGROUND STORAGE TANKS
CORRIDOR 1	ALTERNATE B LINK B1 ALTERNATE E	40.5	9	188	19	3	2	0	11.6 (28.7)	0	1,288.9	1,713.5	2,948.1	2,677.2	5,326.4	1,512.7	3	0	5,228.3	1
CORRIDOR 2	ALTERNATE E	37.4	9	188	18	4	2	0	11.6 (28.7)	0	1,278.4	1,371.1	3,163.6	1,528.3	4,482.3	1,745.4	3	0	5,725.9	1
CORRIDOR 3	ALTERNATE C	37.8	9	195	18	8	3	0	11.6 (28.7)	0	808.7	1,160.8	1,119.5	1,186.7	5,801.2	1,056.1	1	0	7,522.3	3
CORRIDOR 4	ALTERNATE C LINK C2 ALTERNATE E	37.0	8	223	18	9	3	0	11.6 (28.7)	0	668.9	979.9	1,533.4	1,648.2	5,186.3	1,088.4	4	0	6,334.5	1
CORRIDOR 5	ALTERNATE C LINK C3 ALTERNATE E	37.6	10	193	18	8	3	0	11.6 (28.7)	0	678.3	895.6	1,222.7	1,398.6	5,502.5	833.3	1	0	6,816.1	1
CORRIDOR 6	ALTERNATE E LINK E2 ALTERNATE C	38.7	10	159	18	3	2	0	11.6 (28.7)	0	1,311.0	1,389.7	2,621.8	1,076.8	5,285.4	1,672.7	0	0	7,074.9	3
CORRIDOR 7	ALTERNATE E LINK E2 ALTERNATE C LINK C3 ALTERNATE E	38.6	11	157	18	3	2	0	11.6 (28.7)	0	1,180.6	1,124.5	2,725.1	1,288.7	4,986.8	1,449.9	0	0	6,368.7	1
SEGMENT E3-B		**ELIMINATED DUE TO UNAVOIDABLE WETLAND AND OTHER NATURAL RESOURCE IMPACTS TO BLACK BAYOU.**																		
LINK C1		**ELIMINATED DUE TO INCREASED HIGHWAY LENGTH, UNDESIRABLE HIGHWAY AND BRIDGE GEOMETRY, AND POTENTIAL FLOODPLAIN IMPACTS.**																		
LINK E1		**ELIMINATED DUE TO INCREASED HIGHWAY LENGTH, UNDESIRABLE HIGHWAY GEOMETRY, AND POTENTIAL STREAM AND FLOODPLAIN IMPACTS.**																		

NOTES:
1. VALUES ARE EXPRESSED IN HECTARES (ACRES)
2. CORRIDORS ARE COMBINATIONS OF ALTERNATES AND LINKS.
3. INCLUDES ONLY 100-YEAR FLOODPLAIN INVOLVEMENT.

The actual highway impacts for a roadway approximately 90 meters (300 feet) in width, would be substantially less. The data in the matrix provide a comparative tool to assess the potential involvement with studied resources across all corridors. For example, if one corridor contains 200 residences and another corridor 100, there is a greater ability to avoid and minimize residential displacements during alignment development in the latter corridor. It is also important to note that the presence of a resource within a corridor is not an indication that the resource would be affected. Through more detailed assessment during the Alignment Study, many important environmental features, such as recorded archaeological sites, could be avoided entirely.

2.3.4 Corridor Segments and Links Considered but Eliminated

One segment and several links of the developed corridor alternates were eliminated from further consideration during the corridor review and evaluation process due to potential environmental impacts and engineering concerns (Exhibit 2-4). These areas are described in detail below.

Segment E3-B

Segment E3-B diverges northwest from Alternate E north of Huckabay Road and intersects with Alternate B near Vivian. At this point, Alternate B continues north crossing Black Bayou before converging with Alternate E near the state line. Link E3 and a portion of Alternate B north of Link B1 were eliminated due to unavoidable wetland and other natural resource impacts to Black Bayou. As discussed previously, the U.S. Fish and Wildlife Service had identified Black Bayou and the associated cypress wetland ecosystem as an extremely important area to avoid during this study. Furthermore, compliance with Section 404 of the Clean Water Act would prohibit wetland impacts of this magnitude when there are other project alternatives (Alternates E and C) that meet the project purpose and need, and do not impact this sensitive resource.

Link C1

Link C1 provides a connection from Alternate C to Alternate E just north of Twelvemile Bayou. This Link was eliminated due to increased highway length, undesirable highway and bridge geometry and potential longitudinal floodplain impacts along Twelvemile Bayou.

Link E1

Link E1 provides a connection from Alternate E to Alternate C and begins just south of Twelvemile Bayou. This Link was eliminated due to increased highway length, undesirable highway geometry, and potential stream and floodplain impacts along Twelvemile Bayou.

2.3.5 Comparison of Feasible Corridors

Seven corridor alternates were retained for further consideration and public review (Exhibit 2-4). Again, the presence of a resource within the

corridor is not an indication that the resource would be impacted. The values presented are for the full 600 meter (2,000 feet) wide corridor while the actual highway alignment impacts would be substantially less. A brief description of each corridor and its environmental issues follows.

Corridor 1

Corridor 1 is a combination of Alternates B, B1, and E that was previously described in Section 2.3.1. Corridor 1 follows Alternate B north toward Vivian and then turns northeast on Link B1 south of LA 170. Link B1 then joins Alternate E at LA 2 south of Black Bayou Lake and continues to the state line on Alternate E. This corridor was developed to eliminate the crossing of Black Bayou. Primary concerns with respect to Corridor 1 include impacts to the wetland and floodplain areas along Twelvemile Bayou, oil and gas field impacts in the Caddo-Pine Island and Hosston fields, and the overall length of the corridor.

Corridor 2

Corridor 2 follows the previously described Alternate E. Primary concerns with respect to Corridor 2 include potential wetland and floodplain impacts along Twelvemile Bayou and oil and gas field impacts in the Caddo-Pine Island and Hosston fields.

Corridor 3

Corridor 3 follows the previously described Alternate C. Primary concerns with respect to Corridor 3 are potential impacts to prime farmland, especially along U.S. 71 from Twelvemile Bayou to Hosston and potential impacts to the Red River Raceway located south of Hosston along LA 3049.

Corridor 4

Corridor 4 follows Alternate C toward Hosston where it turns northwest on Link C2 near Huckabay Road. Link C2 is relatively short and joins Alternate E near Kelly Bayou and continues north to the state line. Corridor 4 provides the opportunity to pass west of Hosston via Link C2. Primary concerns with respect to Corridor 4 include potential farmland impacts along U.S. 71 and oil and gas field impacts in the Hosston field.

Corridor 5

Corridor 5 follows Alternate C north toward Hosston where it turns northwest on Link C3 near LA 2 east of town. Link C3 then crosses U.S. 71 between Hosston and Mira, joins Alternate E, and continues to the state line. Corridor 5 would reduce involvement with wetlands associated with Flag Branch and Kelly Bayou and would reduce farmland impacts north of Hosston by moving to Alternate E via Link C3. Concern with potential farmland and Red River Raceway impacts remain and is similar to Corridor 3.

Corridor 6

Corridor 6 follows Alternate E north toward Hosston where it turns northeast on Link E2 near Huckabay Road, crosses U.S. 71, and immediately

joins Alternate C. Corridor 6 continues on Alternate C to the state line. Corridor 6 provides the opportunity to pass east of Hosston on Alternate C while reducing involvement with farmlands by using Alternate E south of Hosston. Primary concerns are potential wetland and oil field impacts similar to Corridor 2, and impacts to the Red River Raceway similar to Corridor 3.

Corridor 7

Corridor 7 follows Alternate E across Link E2 to Alternate C toward Hosston. East of Hosston, Corridor 7 turns northwest on Link C3 near LA 2, crosses U.S. 71 between Hosston and Mira, joins Alternate E, and continues to the state line. Corridor 7 provides similar advantages to Corridor 6, but by using Link C3, reduces involvement with wetlands associated with Flag Branch and Kelly Bayou and would reduce farmland impacts north of Hosston. Primary concerns are similar to Corridor 6.

2.3.6 Corridor Decision-Making Process

After development of the environmental inventory and subsequent corridor comparison analysis, public meetings were held to present the results of the Corridor Study to date and to obtain input on the corridors presented. Meetings were also held with the Shreveport Officials Committee and the Rural Officials Committee to allow corridor review and input. This input guided corridor refinements and aided in the ultimate identification of the Preferred Corridor carried forward for Alignment Study.

Public Involvement

Corridor preference and particular issues of concern were obtained through public meetings held on October 28 and 29, 1997 in Shreveport and Hosston, Louisiana. Dates, locations, and content of the public meetings were publicized through the Shreveport Times, the Shreveport Sun, the Caddo Citizen, and through direct mailings of project flyers to persons who had attended meetings during the 1995 Feasibility Study process. The public meetings included an open forum where citizens had the opportunity to review the corridor locations and talk with project representatives. This was followed by a brief technical presentation and question and answer period.

The corridors were displayed by superimposing their locations over a topographic (USGS quadrangle) map background that also presented the environmental inventory. Comment forms were distributed that asked for corridor preferences as well as additional environmental information that should be considered during corridor refinements.

Approximately 235 persons attended the public meetings. Over 50 comment forms or letters were received. The majority of those expressing a corridor preference were split between Corridors 2 and 3. Three distinct public concerns were

identified through input at the public meetings and through the returned comment forms: impacts to farmlands, especially to land in row crop production south of Hosston near U.S. 71; impacts to oil fields; and impacts to Black Bayou south of Black Bayou Lake. These and previously identified issues of importance to the public were specifically considered in the corridor refinements and recommendation.

Officials Committee Involvement

The results of the corridor location study were presented to the Shreveport Officials Committee and the Rural Officials Committee on October 28 and 29, 1997. Meeting minutes and attendance records of these meetings are on file at DOTD. Discussions at the Rural Officials Committee meeting identified a possible corridor refinement that would reduce prime farmland impacts along U.S. 71 associated with Alternate C. No specific corridor preference was identified by either group.

2.3.7 Corridor Refinements

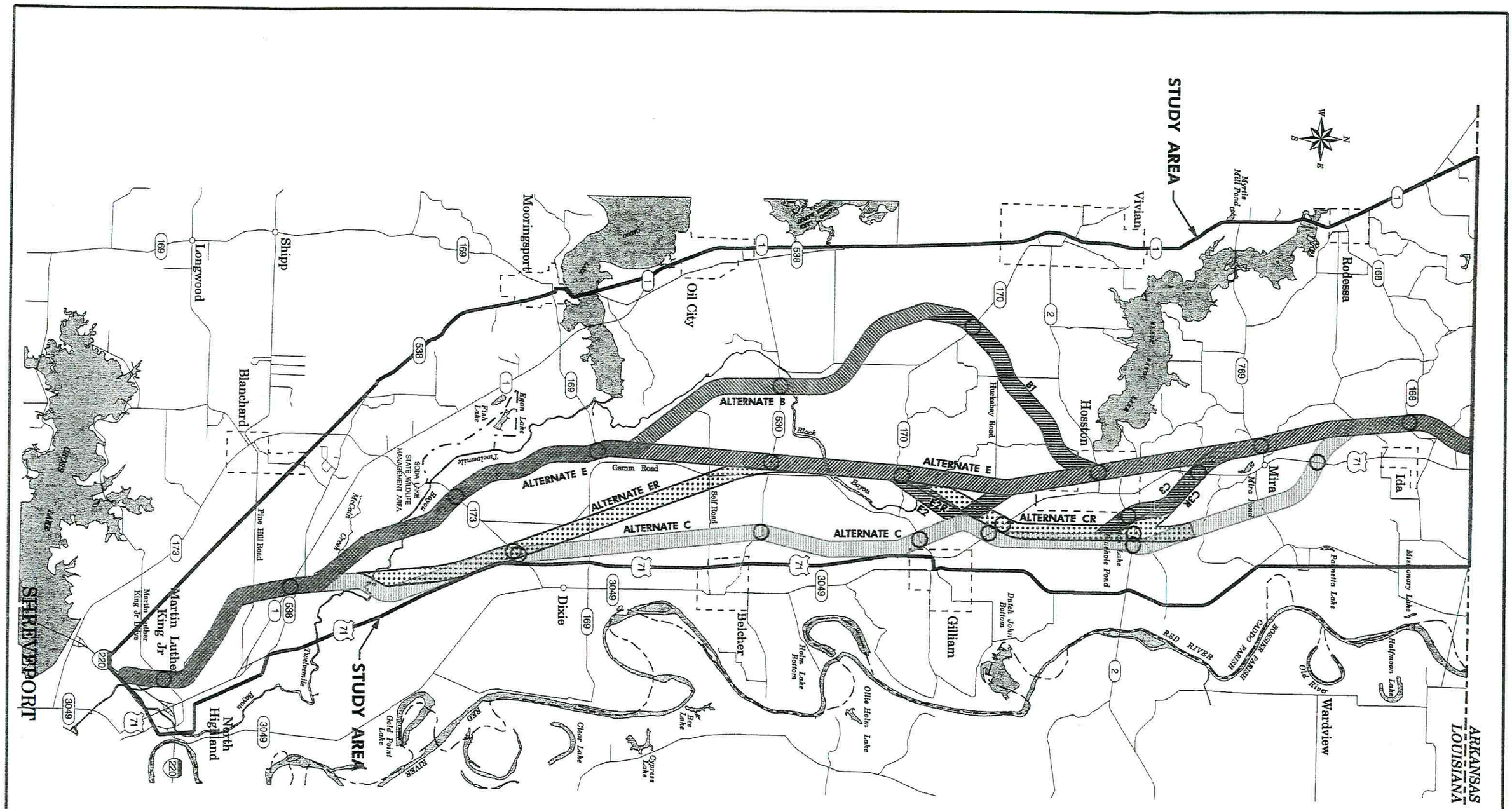
Prior to corridor refinements, the environmental inventory was updated based on information received at the public meetings and through comment forms. This information included:

- Specific property boundaries and plans for the Red River Raceway located south of Hosston along LA 3049
- Two potential wetland areas, one just north of LA 538 and one south of Black Bayou Lake along Black Bayou
- One dump site north of Hosston at the end of Marak Road
- Planned expansion of the Caddo Parish Sewerage District 7 facilities north of LA 538.

Based on public input and potential resource agency concerns, several corridor refinements were developed and are presented in Exhibit 2-5. These have been designated as Corridors 2R, 6R and 7R as they are refinements to Corridors 2, 6, and 7. Refined corridor comparisons are presented in Exhibit 2-6.

Refined Corridor 2R

Corridor 2R was developed by refining Alternate E from Twelvemile Bayou to LA 530 to reduce potential wetland impacts in this area. This refinement would also minimize potential farmland impacts associated with Alternate C in this area and would improve the geometry at the crossing of Twelvemile Bayou. This refinement minimizes potential Alternate E wetland impacts concerns expressed by the U.S. Army Corps of Engineers during the November 19, 1997 meeting and should address concerns raised by the public regarding prime farmland impacts.



LEGEND

- ALTERNATE B
- ALTERNATE C
- ALTERNATE E
- LINKS
- REFINED ALTERNATE OR LINK
- POTENTIAL INTERCHANGE

NORTH–SOUTH EXPRESSWAY

Exhibit 2–5

ORIGINAL CORRIDOR LOCATIONS

NOT TO SCALE

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REFINED CORRIDOR COMPARISONS

VALUES SHOWN ARE WITHIN FULL 2,000 FOOT CORRIDOR.
ACTUAL HIGHWAY IMPACTS WOULD BE SUBSTANTIALLY LESS.

	LENGTH (MILES)	POTENTIAL INTERCHANGES	STRUCTURES					NATURAL RESOURCES							CULTURAL RESOURCES			
													FARMLANDS					
			RESIDENTIAL	BUSINESSES	CHURCHES	COMMUNITY FACILITIES	CEMETERIES	PARKS	HABITAT MANAGEMENT AREAS	WETLANDS	HYDRIC SOILS	FLOODPLAINS	OIL AND GAS FIELDS	PRIME FARMLAND	LOCAL FARMLAND OF STATEWIDE IMPORTANCE	RECORDED ARCHAEOLOGICAL SITES	RECORDED HISTORIC STRUCTURES	HIGH PROBABILITY AREAS (ACRES)	SOLID WASTE AND UNDERGROUND STORAGE TANKS
CORRIDOR 2R	36.8	9	212	18	7	2	0	11.6 (28.7)	0	735.4	1,296.5	2,320.8	968.2	4,562.2	1,643.8	3	0	5,799.7	1
CORRIDOR 6R	38.0	10	184	19	6	2	0	11.6 (28.7)	0	826.5	1,465.1	2,065.5	457.1	5,299.2	1.587.8	0	0	7,089.6	3
CORRIDOR 7R	37.8	11	183	18	6	1	0	11.6 (28.7)	0	689.9	1,201.1	2,112.9	670.3	5,029.6	1,342.3	0	0	6,388.5	2

NOTES:
1. VALUES ARE SHOWN IN HECTARES (ACRES)
2. CORRIDOR 2R IS COMPRISED OF ALTERNATE E, ALTERNATE ER AND ALTERNATE E.
3, CORRIDOR 6R IS COMPRISED OF ALTERNATE E, LINK E2R, ALTERNATE CR AND ALTERNATE C.
4. CORRIDOR 7R IS COMPRISED OF ALTERNATE E, ALTERNATE CR, LINK C3R AND ALTERNATE E.
5. INCLUDES ONLY 100-YEAR FLOODPLAIN INVOLVMENT.

NORTH-SOUTH EXPRESSWAY
Exhibit 2-6
REFINED CORRIDOR COMPARISONS
Baker
NOT TO SCALE

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Exhibit 2-6 shows that the 2R refinement reduces wetland and floodplain acreage within the 600 meter (2,000 feet) wide corridor when compared to Corridor 2 and reduces the acreage of prime farmland soils when compared to Corridor 3.

Refined Corridor 6R

Refinements to Link E2 and to Alternate C between Gilliam and Hosston were developed to minimize potential impacts to the Red River Raceway. This corridor also includes the refinements described for Corridor 2R which reduced wetland impacts when compared with Corridor 6.

Refined Corridor 7R

Corridor 7R includes the refinements described for Corridor 6R and includes a refinement in Link C3 to improve the highway geometry in this area.

2.3.8 The Preferred Corridor for the North-South Expressway

The information collected and evaluated in this and previous studies, combined with extensive public, local official and agency involvement in the corridor evaluation process, is sufficient to identify and advance a preferred corridor to the Alignment Study. As discussed earlier, the data presented in Exhibit 2-4 and Exhibit 2-6 are the inventory of resources within a given corridor. The data therefore represents the potential impacts of future alignment locations within a given corridor. The objective of this phase of study was to identify a corridor that represents the best opportunity to develop highway alignments within it that avoid or minimize impacts. It is unlikely that one corridor represents the *least* potential impact to all resource categories.

All corridors would have environmental impacts. Of the resources studied, the North-South Expressway would ultimately have the greatest effect on residences, farmlands, wetlands floodplains, and oil wells. Impacts to businesses, churches, cemeteries, parks, and cultural resources would occur to a lesser extent and in some cases, could be avoided entirely. The corridor that would minimize impacts overall and that meets the project purpose and need, should be carried forward to the Alignment Study.

Based on the corridor comparison and corridor refinement analyses, several corridors were removed from consideration as viable options for further study due to unavoidable environmental impacts to wetlands, floodplains, or prime farmlands. These corridors would not allow the development of highway alternatives that could minimize impacts to these resources in any appreciable manner. Corridor 1 was eliminated due to unavoidable wetland impacts along Twelvemile Bayou. Corridors 3, 4, and 5 were eliminated due to prime farmland impacts along U.S. 71 between Twelvemile Bayou and Hosston. Corridors 2, 6, and 7 have been refined as discussed in Section 2.3.7 to specifically address concerns with wetland and farmland impacts.

Three refined corridors, Corridors 2R, 6R, and 7R remain viable for further consideration during the Alignment Study. A comparison of Exhibit 2-4 and Exhibit 2-6 information shows that this revision substantially reduced wetland involvement in the resulting refined Corridors 2R, 6R, and 7R, and reduced involvement with prime farmland soils when compared to Corridor 3.

Corridor 2R represents the best balance of potential impacts to farmlands and wetlands, but could affect more residences and oil wells in the Hosston area than Corridors 6R and 7R which pass to the east of Hosston. However, selecting Corridor 6R or 7R may result in design difficulties when developing alignments in the Red River Raceway area due to its proximity to Kelly Bayou. Furthermore, Corridor 6R would involve additional wetland impacts associated with Flag Bayou north of Hosston. While information on wetlands, farmlands, and residences is extensive, more detailed mapping was needed to better evaluate the effect on oil wells, the Red River Raceway, and Kelly Bayou.

Based on the above information, Corridor 2R, along with Corridor 7R in the Hosston area, were identified and carried forward into the Alignment Study as the Preferred Corridor (Exhibit 2-7). Of the corridors studied, the Preferred Corridor provides the greatest opportunity to ultimately develop a highway alignment that best balances the expected project benefits with the overall impacts. The Corridor Study process thoroughly considered potential environmental and social impacts and the ability to avoid and minimize these impacts where possible.

Of the corridor comparison categories in Exhibit 2-4 and Exhibit 2-6, the Preferred Corridor has the potential to be the shortest corridor in length, has the fewest residential impacts, and has the least involvement with prime farmlands. In addition, the Preferred Corridor is among the lowest with respect to potential wetland, oil and gas field and high probability area involvement. The Preferred Corridor is similar to most corridors with respect to potential impacts to businesses, churches, community facilities, and known solid waste and underground storage tanks. The Preferred Corridor does not have the highest value in any resource category inventoried.

This recommendation satisfies, to the fullest extent possible, the objectives of the merged NEPA/404 process that has been adopted for this study. Both Corridor 2R, and Corridor 7R in Hosston, represent two of the lowest inventory of wetlands of the corridors studied.

In the Hosston area, both corridors cross Black Bayou, Kelly Bayou and associated wetland systems and would result in similar impacts to waters of the United States, regardless of the route chosen in this area.

A corridor recommendation was submitted to participating state and federal resource agencies, including the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the U.S. Environmental Protection Agency. The corridor recommendation detailed the corridor study process, provided the rationale for the selection of the Preferred Corridor, and requested written comments. All agencies responding concurred with the Preferred Corridor. This correspondence is provided in the Appendix.

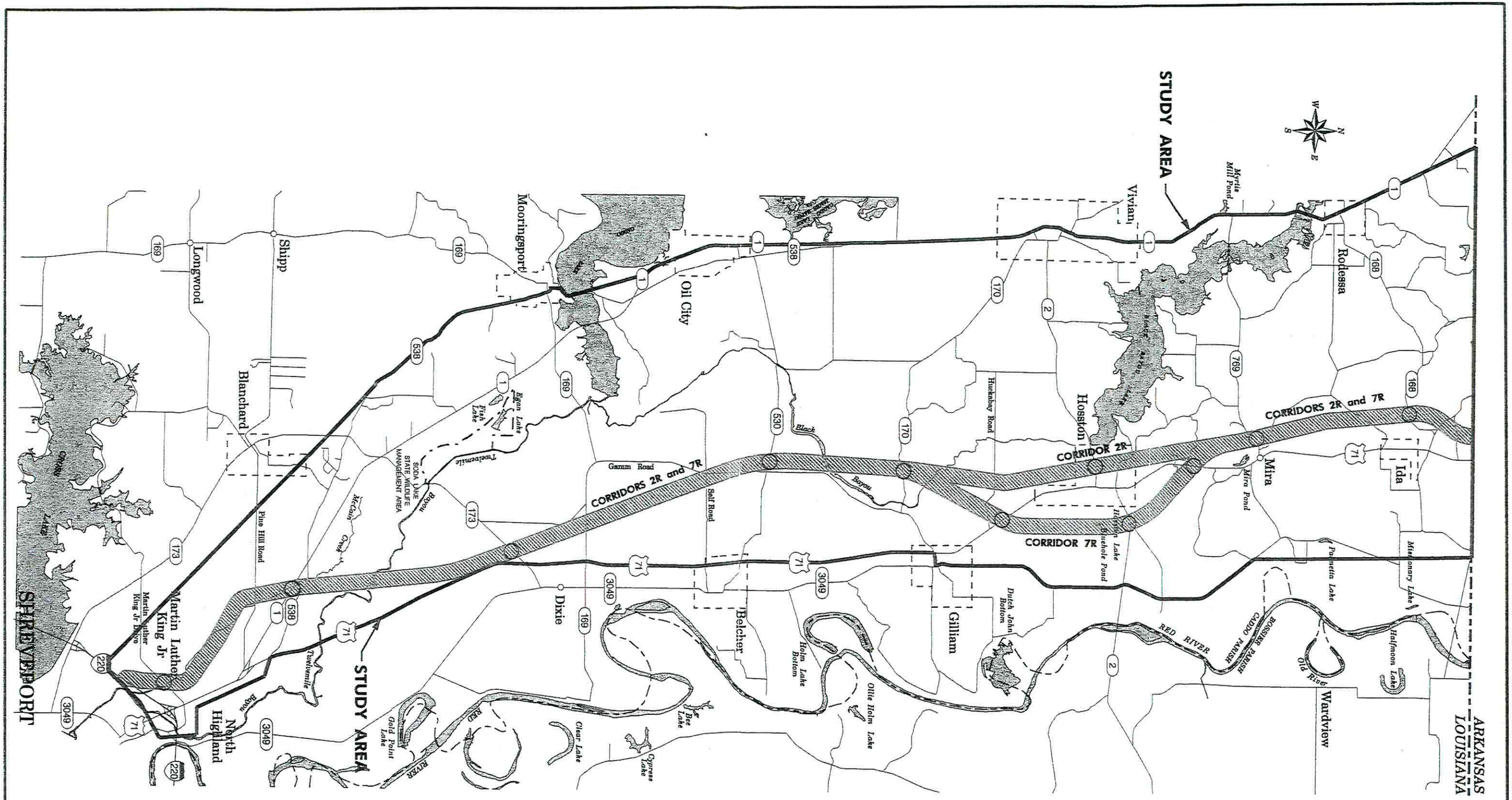
2.4 ALIGNMENT STUDY

The Alignment Study consisted of a focused effort within the Preferred Corridor and included:

- ❑ Updating the project mapping - 1:5,000 scale (1"≈400') based on 1993 aerial photography
- ❑ Updating or adding the following project GIS environmental information
  - Water well information
  - Updated hazardous waste site information
  - Potential historic standing structures survey
  - Field delineated wetlands
  - Farmed wetland information
  - Streams information
  - Standing structures survey to update 1993 photography
  - Site boundaries of known archaeological sites
  - Property information from Caddo Parish tax maps
- ❑ Developing preliminary alignments and conducting environmental field studies
- ❑ Presenting alignment comparisons to the public and officials committees for review and comment
- ❑ Conducting field reviews of the preliminary alignments with resource agencies to obtain comments
- ❑ Revising the alignments based on public, officials committees, and agency comments
- ❑ Developing a Draft EIS that identified a Preferred Alignment
- ❑ Presenting the Draft EIS and Preferred Alignment at public hearings for public and officials committees review and comment
- ❑ Distributing the Draft EIS to state and federal agencies and other organizations for comment
- ❑ Revising the Preferred Alignment based on the comments received for consideration in the Draft EIS.

The public meetings and hearings held during the Alignment Study provided detailed information on potential impacts to both environmental resources and personal property, the primary public concern.

During public hearings, the Preferred Alignment, as described and presented in the Draft EIS for this project, was scrutinized by the public, local officials, and agency representatives prior to a final decision on the Selected Alignment. A summary of public involvement is presented in Section 7.



NORTH–SOUTH EXPRESSWAY

Exhibit 2–7

PREFERRED CORRIDOR

Baker | NOT TO SCALE

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2.4.1 Alignments Developed

The Preferred Corridor was divided into three (3) discrete sections to allow a more detailed analysis of potential impacts. Section 1 begins at I-220 midway between the LA 173 interchange and the U.S. 71/LA 1 interchange and terminates just north of LA 169; Section 2 begins just north of LA 169 and ends just north of LA 2; and Section 3 begins just north of LA 2 near the Hosston Rodessa Road and terminates at the Arkansas state line.

Three distinct highway alignments were developed within the Preferred Corridor and are presented in Exhibit 2-8. The alignments are identified as Line 1, Line 2, and Line 3. Within some sections, two, or all three alignments may be in the same location due to environmental or engineering constraints in that reach of the Preferred Corridor. The alignments also cross and intersect at various points which allows potential crossovers from one alignment to another. In two locations, alignments were developed outside of the Preferred Corridor to further minimize residential impacts, minimize impacts to large property tracts, and to provide more acceptable crossings of local roads. A brief description of the environmental and engineering issues in each section is provided below.

Section 1 Alignments

Alignment development in the southern portion of Section 1 between I-220 and Martin Luther King, Jr. Drive (MLK) was influenced by residential development, the location of the I-220 interchange, the location of McCain Creek, and the location of Paul Lynch Park, a potential Section 4(f) property. North of MLK, alignment development attempted to minimize longitudinal impacts to McCain Creek and the associated floodplain and wetland systems, avoid a residential subdivision west of McCain Creek, and provide suitable crossings at Pine Hill Road and LA 1. North of LA 1, important issues considered were the crossing of LA 538, Caddo Sewerage District No. 7 plant expansion; residences along Albany Road, the crossing of Twelvemile Bayou and the associated floodplain and wetland systems, and large property tracts between Albany Road and LA 169.

Section 2 Alignments

Alignment development in the southern portion of Section 2 was influenced by the intersection of Self Road and Gamm Road and the Caddo-Pine Island Oil and Gas field north of Black Bayou. North of the oil and gas field, important issues considered were: the Red River Raceway property, the crossing of LA 2, Black Bayou Lake and dam, residential development north of LA 2, and the development of an acceptable interchange for Hosston and Vivian. Alignments in Section 2 diverge after crossing Kelly Bayou, with Lines 1 and 3 remaining west of Hosston, while Line 2 turns east, crosses U.S. 71, and remains east of Hosston. Line 3 was developed outside of the Preferred Corridor in this area to reduce residential

impacts on the west side of Hosston and to provide more acceptable local road crossings.

Section 3 Alignments

Alignment development west of Hosston, was primarily influenced by residential development west of U.S. 71. East of Hosston, development of Line 2 considered Kelly Bayou and an oil and gas field northeast of town. North of Hosston, the two corridors converge west of U.S. 71 and continue to the Arkansas state line. Important issues considered in this area were the terrain and the development of acceptable crossings of local roads.

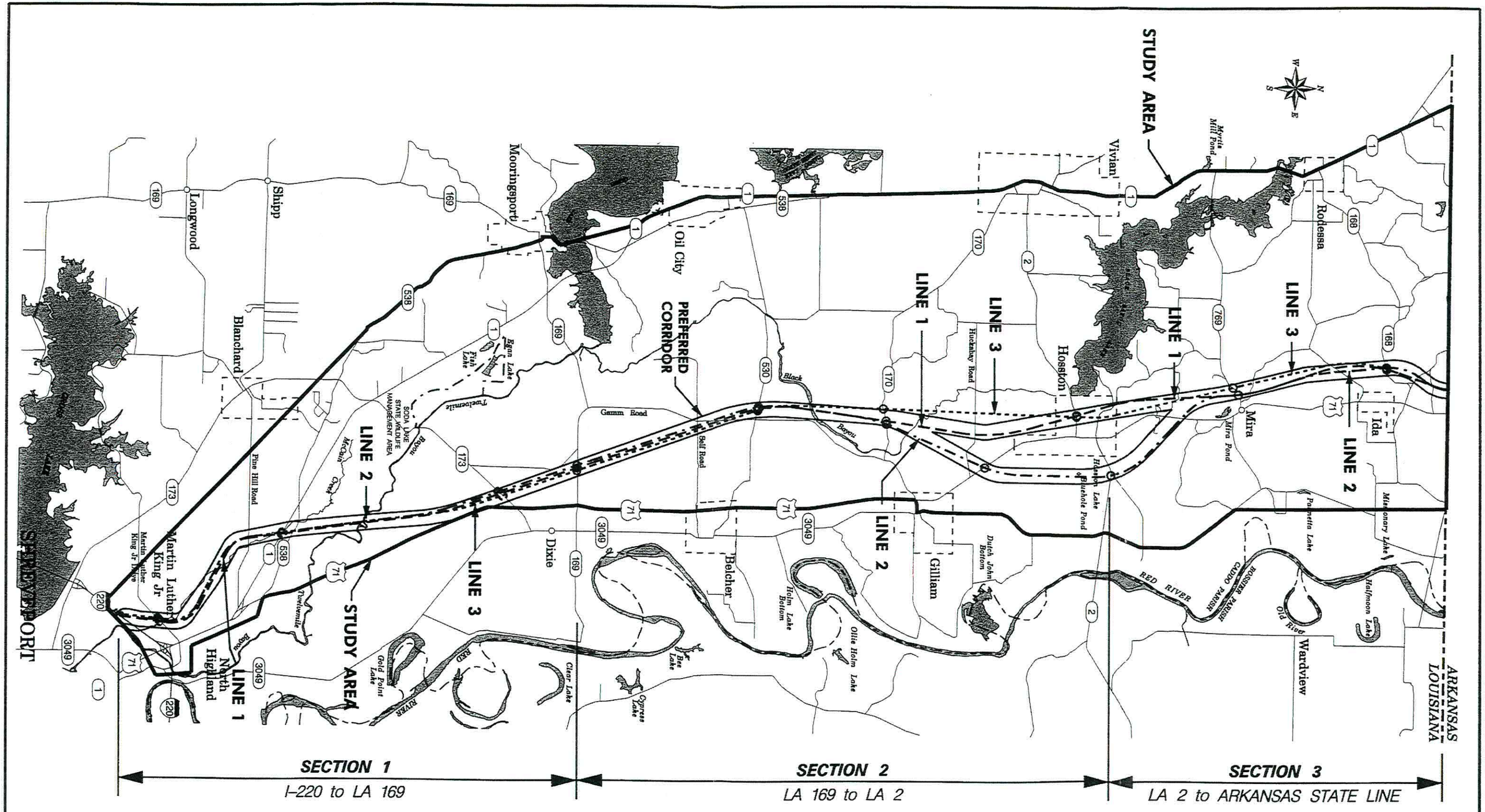
2.4.2 Public, Officials Committee, and Agency Involvement

Public alignment preference and particular issues of concern were obtained through public meetings held on March 31 and April 1, 1998 in Shreveport and Hosston, Louisiana. The alignments were displayed on 1993 aerial photography that enabled the public to more easily identify individual properties, residences, and businesses. In addition, a preliminary alignment impacts matrix was displayed to provide the public with specific environmental and engineering information to compare each alignment in each project section. Comment forms were distributed that requested alignment preferences as well as additional environmental information that could be considered during alignment revisions.

Approximately 290 people attended the public meetings. The majority of comment forms and letters received concerned the alignments in the Hosston area. Of the 27 comments received expressing a preference in this area, 25 favored the alignment east of Hosston. Many individuals cited the reduction of residential impacts by Line 2 as the basis for their decision. No comments were received that expressed concern with the impacts to or proximity of the alignments with the proposed Paul Lynch Park property.

The results of the alignment study were presented to the Shreveport Officials Committee and the Rural Officials Committee on March 30 and April 1, 1998. Meeting minutes and attendance records of these meetings are on file at DOTD.

An agency coordination and field review meeting was held March 31, 1998 which focused primarily on the effect of the various alignments on environmental resources, specifically wetlands and residences. Possible adjustments to further minimize impacts were discussed. During the field review, the U.S. Fish and Wildlife Service suggested an alignment shift that would reduce impacts to a forested wetland system and identified Line 2 (east of Hosston) as their preferred route.



LEGEND

LINE 1 — — —⊖ POTENTIAL INTERCHANGE
LINE 2 — · —⊖ POTENTIAL INTERCHANGE
LINE 3 - - - - -⊖ POTENTIAL INTERCHANGE

NORTH–SOUTH EXPRESSWAY

Exhibit 2–8

PRELIMINARY ALIGNMENTS

Baker | NOT TO SCALE

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Prior to the field review, a meeting was held on March 19, 1998 with two representatives from the U.S. Army Corps of Engineers to discuss the preliminary alignments and the resulting wetland impacts. The Corps also field reviewed several delineated wetland systems and concurred with the delineation methodology and wetland boundaries.

2.4.3 Alignment Revisions

Based on the comments received from the public, officials committees, and the resource agencies, potential alignment revisions were studied, and where feasible, were incorporated into the preliminary alignments. In summary, the most notable revisions were:

- The addition of an interchange at LA 169 in response to numerous public requests for this access
- The elimination of bridges for all alignments at Gamm Road and the relocation of this road east of the alignments
- The shifting of Line 2 to minimize impacts to a forested wetland system per comments from the U.S. Fish and Wildlife Service.

Other minor revisions were made to the preliminary alignments to improve highway geometry and reduce impacts to sensitive environmental areas. These included improving local road crossings and further reducing impacts to wetlands and other water resources.

2.4.4 Evaluation of Additional Alternatives – The Southern Terminus Study

In response to comments received at the March 31, 1998 public meeting and subsequent meetings with representatives of the Shreveport Metropolitan Planning Commission (MPC), additional studies were conducted at the project's southern terminus. The Southern Terminus Study (STS) evaluated a concept outlined in the MPC's North Shreveport Regional Development Plan that would connect the southern portion of the North-South Expressway to I-220 at the U.S. 71/North Market Street interchange. Major steps in the STS are outlined in the updated study process flowchart shown in Exhibit 2-9. The primary phases of work for this study included:

- Expanding the GIS Environmental Inventory through additional mapping and updating environmental data from state and federal resource agencies for the expanded study area
- Developing additional alignment alternatives and interchange concepts within the expanded study area
- Conducting field studies to document wetland resources, and standing structures, and to collect noise measurements
- Conducting meetings with the public and local officials to present and discuss results of the STS.

Additional Alternatives

Two additional alignments, Line 4 and Line 5, were considered that would provide a direct connection

of the North South Expressway to I-220 at the U.S. 71/North Market Street interchange (Exhibit 2-10). Each alternative consisted of a distinct highway alignment and a conceptual interchange design for the North South Expressway with I-220 and U.S.71 interchange. Both alternatives begin near the crossing of LA 1 and proceed south. Line 4 would construct the North South Expressway on new alignment, generally paralleling the previously developed lines along McCain Creek, but would continue to the southeast to the interchange at I-220/U.S. 71. Line 5 would reconstruct existing LA 1 and U.S. 71 to interstate standards from McCain Creek east along LA 1 and then south along U.S. 71 to the interchange with I-220. This alignment would replace LA 1 and U.S. 71 with a four-lane, divided, fully controlled access highway with one way frontage roads on either side to carry local traffic.

In conjunction with the additional alternatives development, a traffic study was conducted to ensure that the conceptual interchange configurations would adequately accommodate traffic through the year 2020. The GIS environmental inventory was also updated through additional field investigations and collection of secondary source environmental data, including property ownership within the expanded project area. Field investigations included an inventory of all primary standing structures (residences, mobile homes, businesses, public facilities, churches), an historic standing structure survey, identification and delineation of potentially impacted wetland areas, and collection of noise measurements. Other environmental data collected and updated from various state and federal agencies included information on floodplains and floodways, cultural resources, water wells, hazardous waste sites, and land use.

Alternatives Evaluation

To evaluate the new alternatives from LA 1 to I-220, a matrix of six measurement categories was developed that considered the effectiveness of each alternative at meeting the project purpose, meeting the project need, the ease of implementing a particular alternative, environmental impacts, community support, and relative cost (Table 2-1). Line 4 and Line 5 were compared to an alignment alternative developed during refinements of the original lines as described in Section 2.4.3. This refined alignment was developed within the Preferred Corridor with a southern terminus at I-220 midway between the LA 173 and the U.S. 71/LA 1 interchanges. Of the three original alignments, the refined alignment avoids the proposed Paul Lynch Park property (Section 4(f) resource), has the least wetland impacts, and would have the fewest residential impacts in the Martin Luther King Jr. Drive area. Similar to Lines 4 and 5, a conceptual interchange was designed at the North South Expressway/I-220 juncture.

CORRIDOR STUDY

SCOPING PROCESS
- Agencies
- Officials Committees

PURPOSE AND NEED REVIEW
- AHTD 1988 Study
- DOTD 1995 Corridor Study
- Local Issues
- Coordination with COE for NEPA /404

GIS ENVIRONMENTAL INVENTORY (EI)
- Quad Sheets
- Environmental Issues agreed on from scoping sessions

PUBLIC MEETINGS
- Present Purpose and Need Summary
- Present Corridor Constraint Map
- GIS Screening
- Officials Committee Meetings

CORRIDOR REFINEMENTS
- Coordinate Preferred Corridor Recommendations with COE for NEPA /404 Process

CORRIDORS CARRIED FORWARD

ALIGNMENT STUDY

REFINE GIS ENVIRONMENTAL INVENTORY
- New Mapping (≈400 scale)
- Add Environmental data as agreed on during scoping

PRELIMINARY ALIGNMENT DEVELOPMENT
- Avoid /Minimize Impacts to known Resources
- GIS Analysis and Screening

ENVIRONMENTAL FIELD STUDIES
- Wetland Delineations
- Structure Identification (in addition to Corridor Study Data)
- Noise Receptors
- Confirm Oil/Gas Wells Hazmat Sites, other

PRELIMINARY ALIGNMENT REVIEW
- Public Meetings
- Agency Meetings / Field Reviews
- Officials Committee Meetings

ALIGNMENT REVISIONS
- DOTD Comments on Preliminary Alignments
- Public Comments
- Agency Comments
- GIS Screening
- Coordinate Preferred Alignment Recommendations with COE for NEPA /404 Process

ALIGNMENTS CARRIED FORWARD
- LA 1 to Arkansas State Line

SOUTHERN TERMINUS STUDY

EXPAND GIS ENVIRONMENTAL INVENTORY
- Expand Mapping
- Expand GIS Environmental data as agreed on during scoping

ENVIRONMENTAL FIELD STUDIES
- Wetland Delineations
- Structure Identification
- Noise Receptors
- Confirm Oil/Gas Wells, Hazmat Sites, other

CONCEPT DEVELOPMENT
- Traffic Analysis
- Avoid/Minimize Impacts to known Resources
- GIS Analysis and Screening

CONCEPT REVIEW
- Public Meeting
- Officials Committee Meeting

CONCEPT REVISIONS
- DOTD Comments on Concepts
- Public Comments
- GIS Screening
- Coordinate Preferred Alignment Recommendations with COE for NEPA /404 Process

ALIGNMENTS CARRIES FORWARD
- I-220 to LA 1

ENVIRONMENTAL DOCUMENTATION

PREPARE DRAFT EIS
- Prepare 404 Application
- Technical Reports

PUBLIC HEARING
- Agency Comment

SELECTED ALIGNMENT
- Coordinate Selected Alignment Recommendations with COE for NEPA /404 Process

FINAL EIS
- Address Comments
- Section 106 Memorandum of Agreement

RECORD OF DECISION

PHASE I ARCHAEOLOGY

SYMBOLOGY:
- Review Point and/or Public Meetings
- Work in Progress
- Decision and /or Concurrence Point

NORTH–SOUTH EXPRESSWAY

Exhibit 2–9

REVISED STUDY PROCESS

Baker

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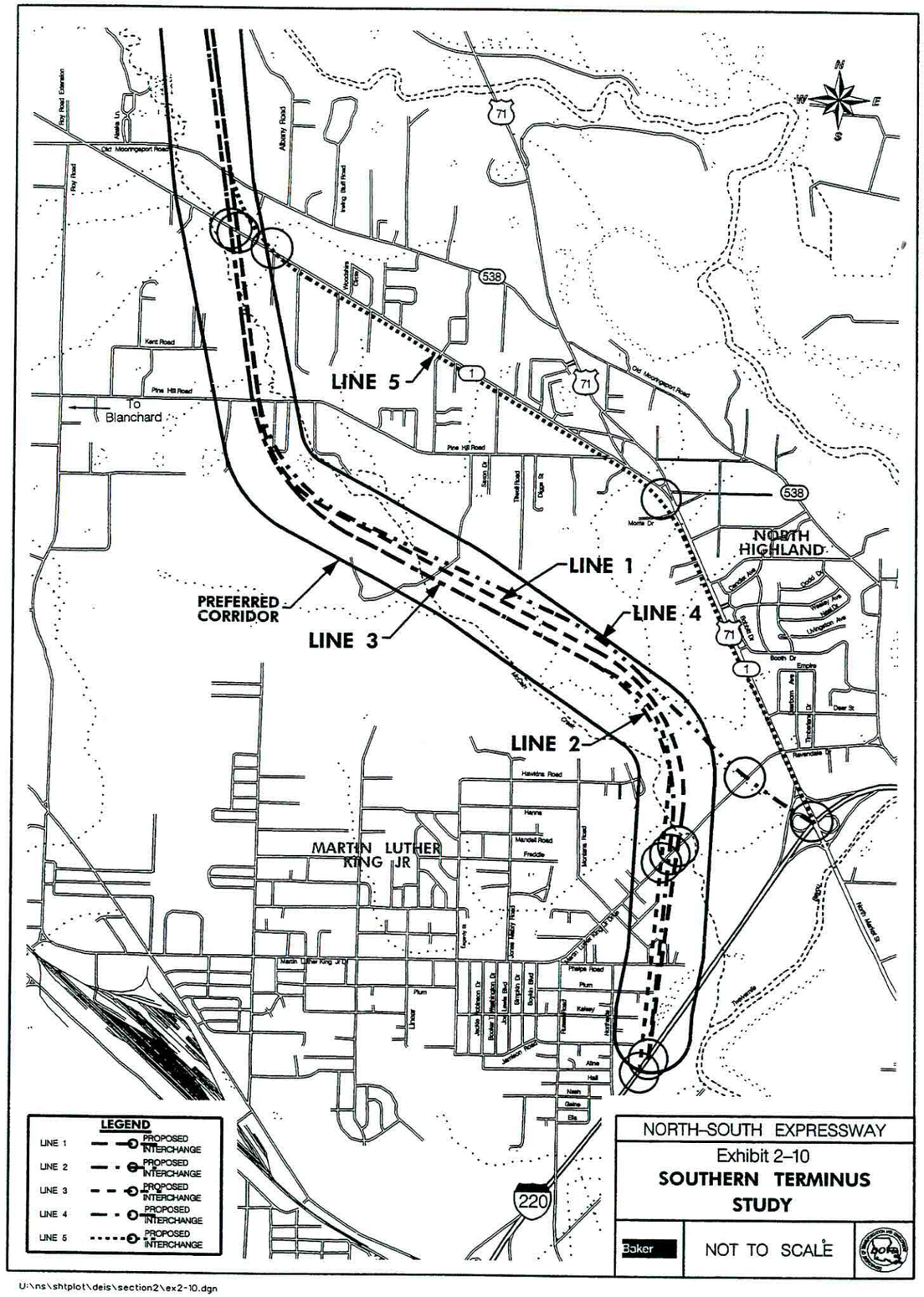

NORTH–SOUTH EXPRESSWAY

Exhibit 2–10

SOUTHERN TERMINUS STUDY

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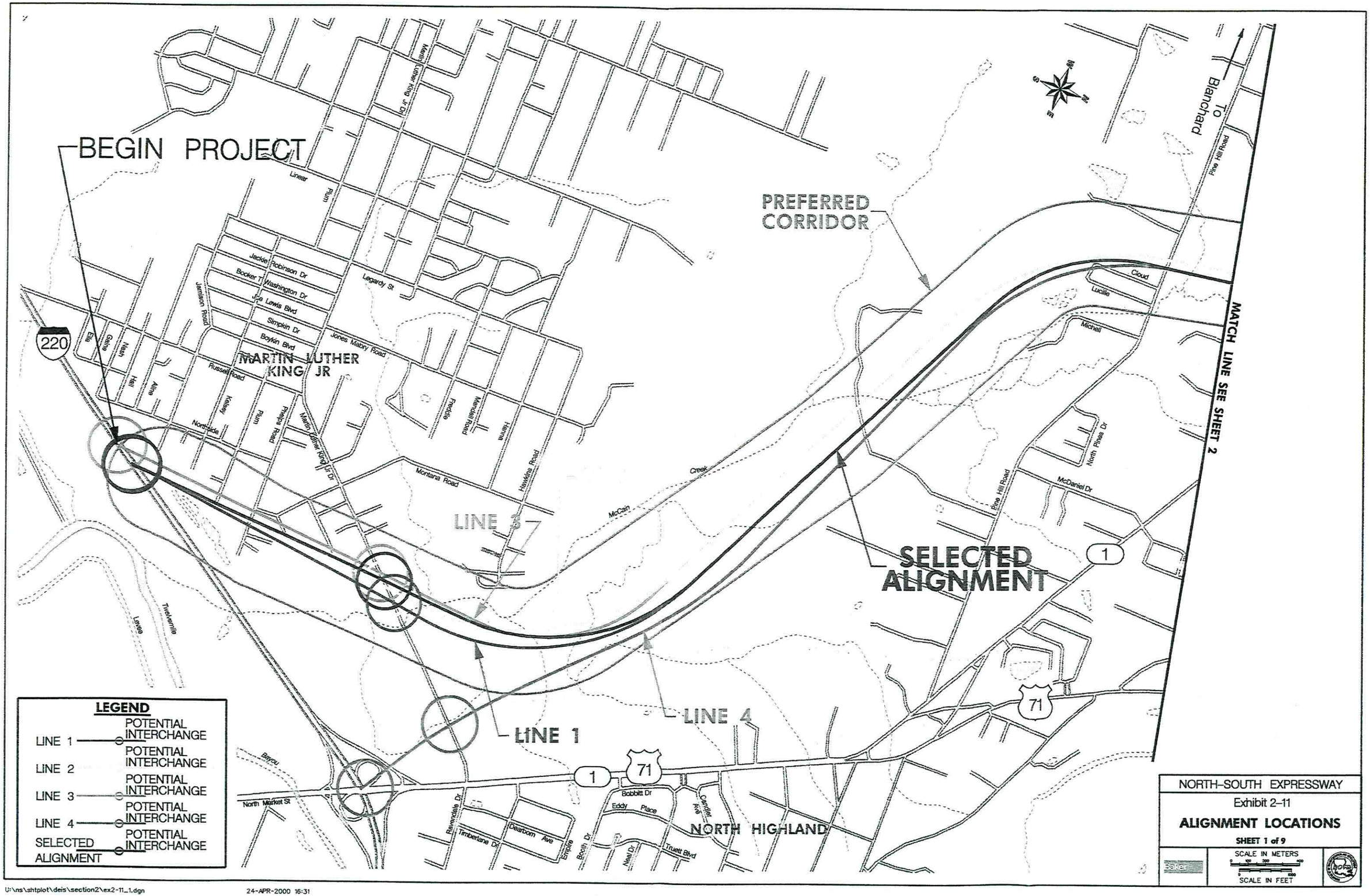

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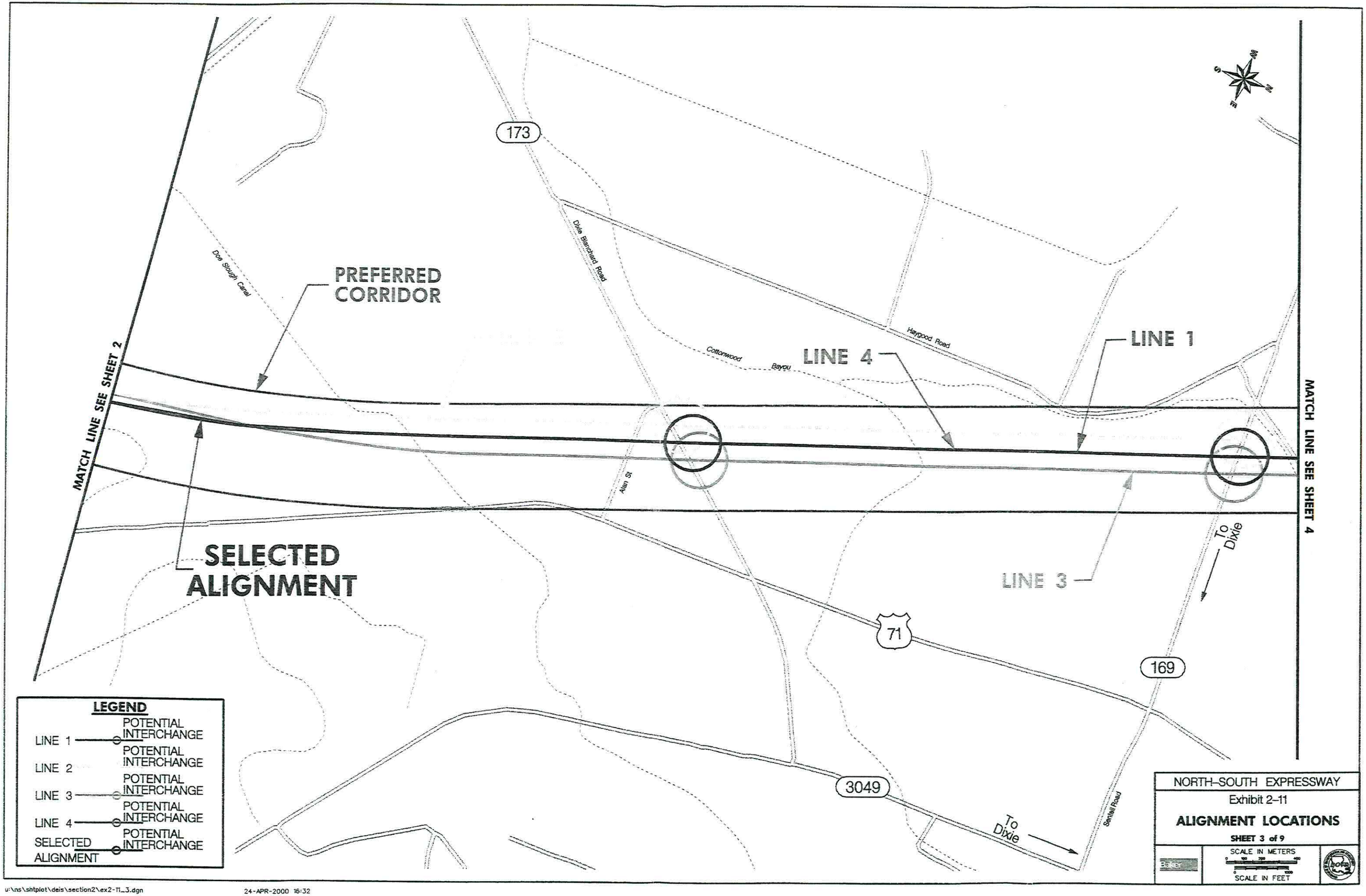

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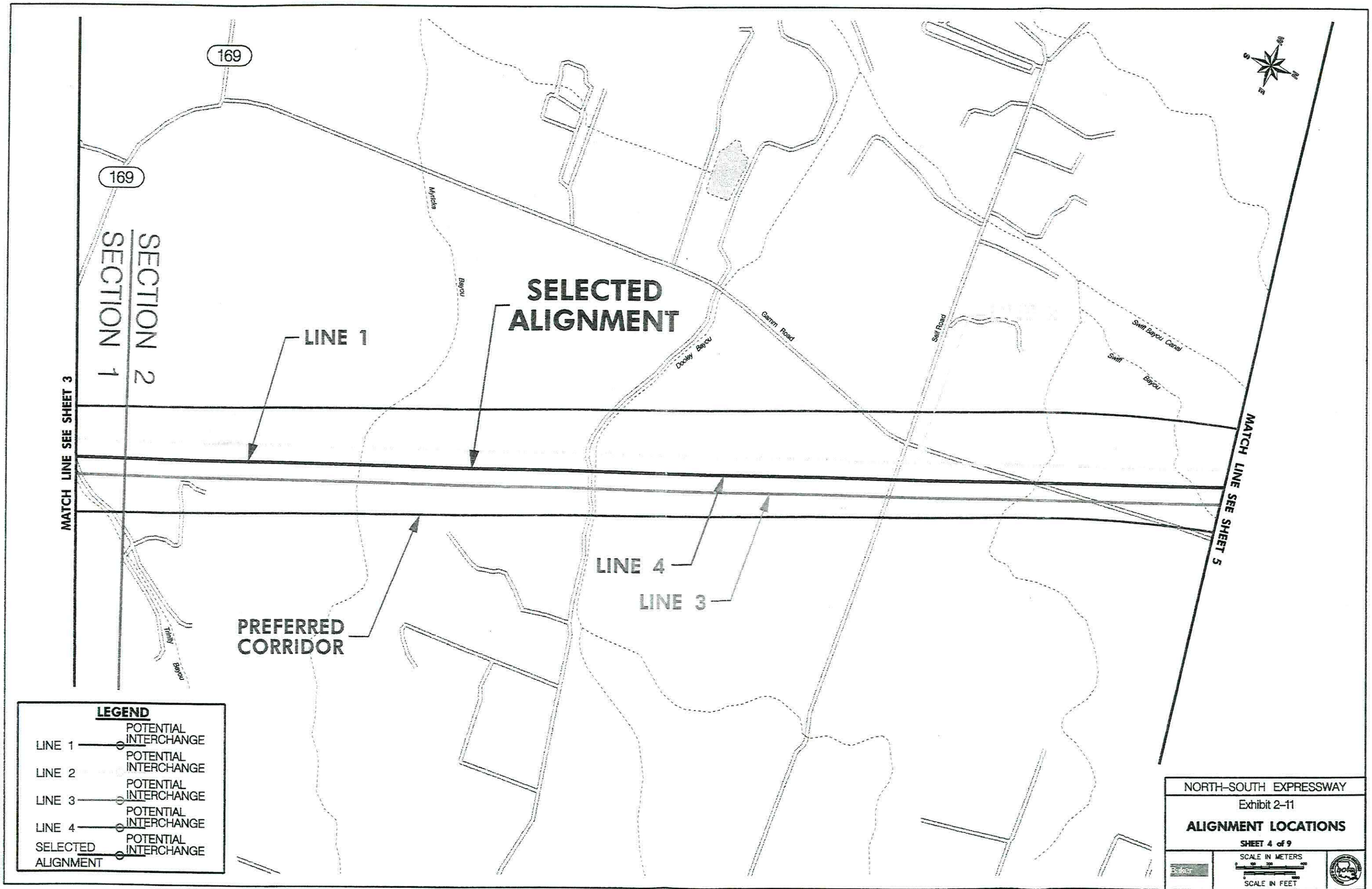

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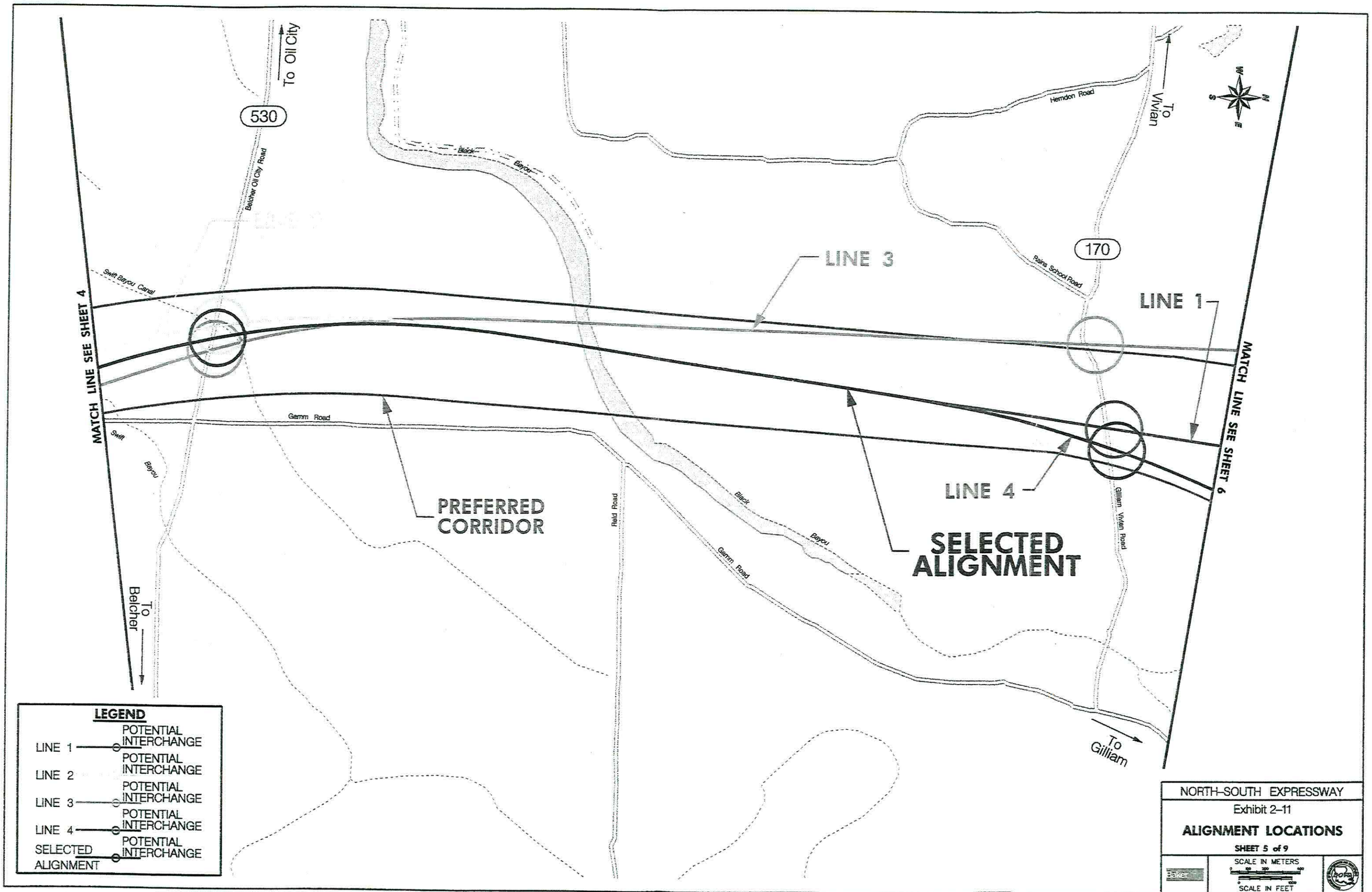
To Oil City
530
Belcher Oil City Road
Black Bayou
Herndon Road
To Vivian
170
Rains School Road
LINE 3
LINE 1
LINE 4
SELECTED ALIGNMENT
PREFERRED CORRIDOR
MATCH LINE SEE SHEET 4
MATCH LINE SEE SHEET 6
Swift Bayou Canal
Gamm Road
Swift Bayou
Reid Road
Black Bayou
Gamm Road
Gilliam Vivien Road
To Belcher
To Gilliam
LEGEND
LINE 1 — POTENTIAL INTERCHANGE
LINE 2 — POTENTIAL INTERCHANGE
LINE 3 — POTENTIAL INTERCHANGE
LINE 4 — POTENTIAL INTERCHANGE
SELECTED ALIGNMENT — POTENTIAL INTERCHANGE
NORTH-SOUTH EXPRESSWAY
Exhibit 2-11
ALIGNMENT LOCATIONS
SHEET 5 of 9
SCALE IN METERS
SCALE IN FEET
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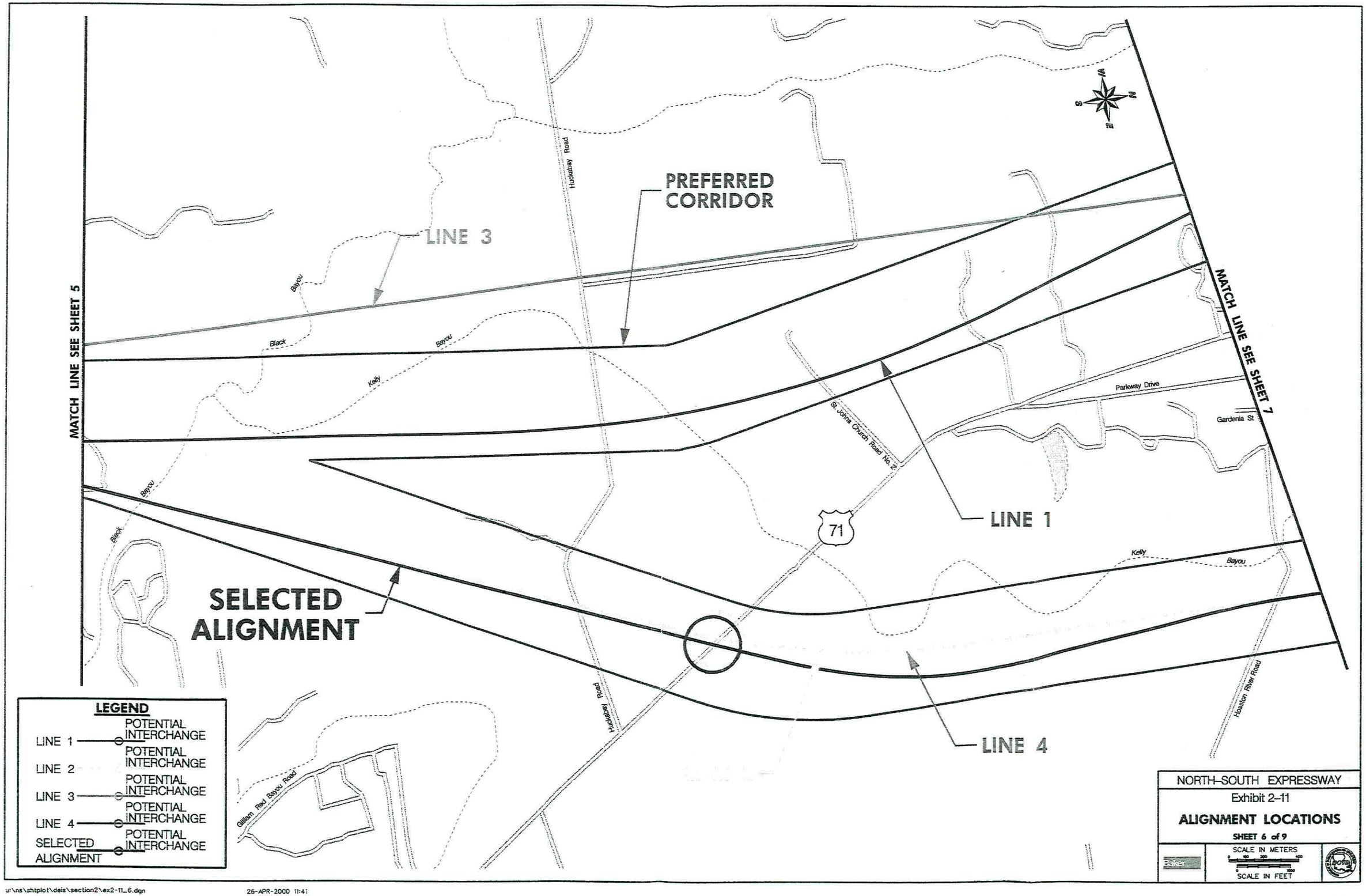

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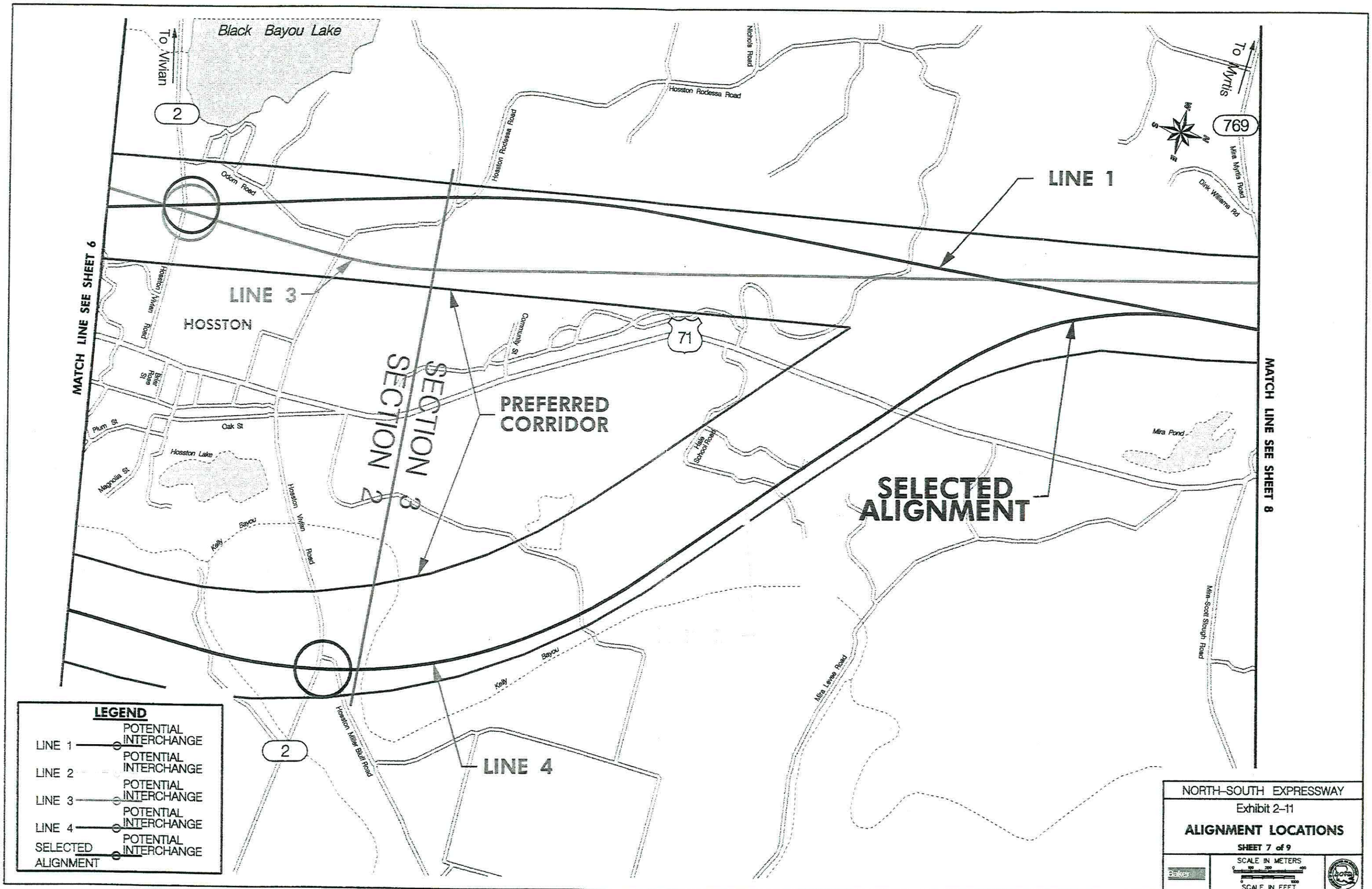

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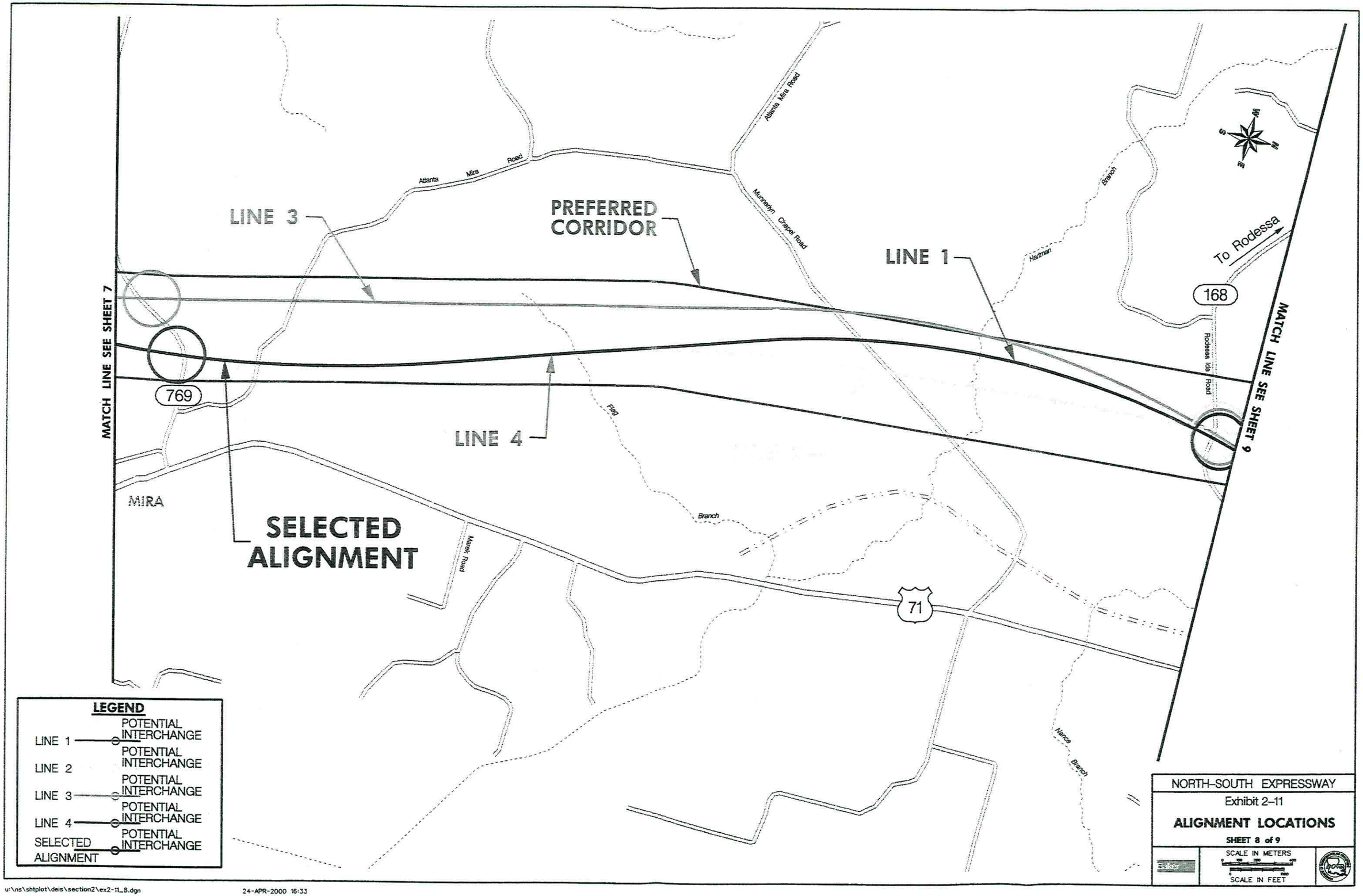

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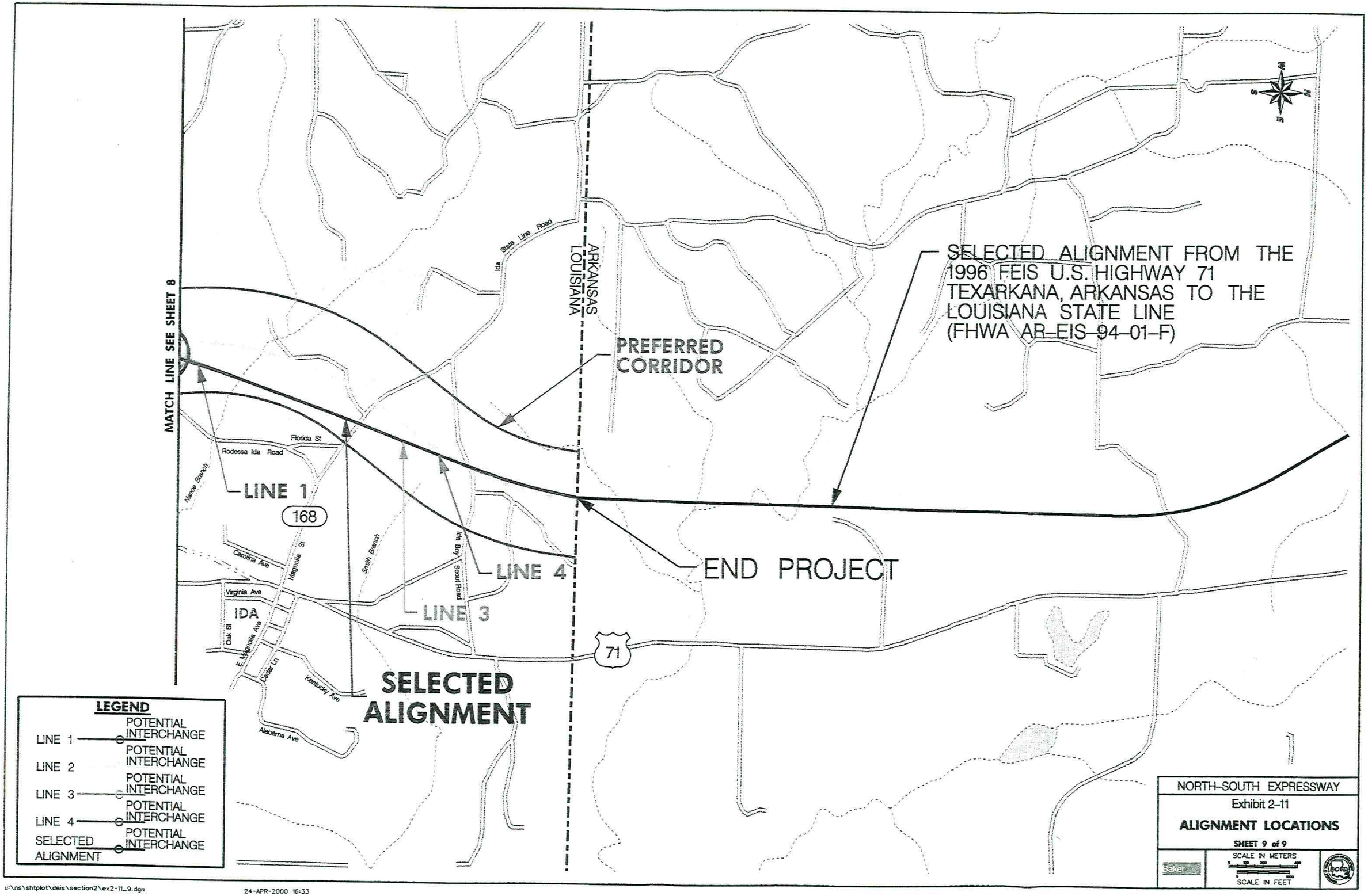
MATCH LINE SEE SHEET 8
ARKANSAS
LOUISIANA
State Line Road
Ida
PREFERRED CORRIDOR
SELECTED ALIGNMENT FROM THE 1996 FEIS U.S. HIGHWAY 71 TEXARKANA, ARKANSAS TO THE LOUISIANA STATE LINE (FHWA AR-EIS-94-01-F)
Florida St
Rodessa Ida Road
Nance Branch
LINE 1
168
Carolina Ave
Magnolia St
Smith Branch
Ida Boy Scout Road
LINE 4
END PROJECT
Virginia Ave
IDA
LINE 3
Oak St
E. Magnolia Ave
Cedar Ln
71
Kentucky Ave
SELECTED ALIGNMENT
Alabama Ave
LEGEND
LINE 1 — POTENTIAL INTERCHANGE
LINE 2 — POTENTIAL INTERCHANGE
LINE 3 — POTENTIAL INTERCHANGE
LINE 4 — POTENTIAL INTERCHANGE
SELECTED ALIGNMENT — POTENTIAL INTERCHANGE
NORTH-SOUTH EXPRESSWAY
Exhibit 2-11
ALIGNMENT LOCATIONS
SHEET 9 of 9
SCALE IN METERS
SCALE IN FEET
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